

able to judge, by the elasticity and resistance, of the force required. Nerve-stretching has been tried in many diseases, peripheral neuralgia, spasmodic affections, epilepsy, paralysis, tetanus, ataxy, anæsthesia in leprosy, etc. The author collects 262 cases, the results being 37 deaths, 16 failures, 34 cases improved, 156 cures, and 9 in which the result is not stated. Nerve-stretching has been most successful in peripheral neuralgia; out of 99 cases 74 were cured, 12 improved, 7 doubtful, and only 6 failures. In contractures, 14 cases, there were 12 cures; in facial tic, 7 cases, 6 cures; in traumatic spasms, 12 cases, 10 cures; in peripheral paralysis, 34 cases, all successful. Although experiment proves that nerve-stretching influences the spinal cord, in disease of central origin its effects are unsatisfactory. In 36 cases there were 5 cures, 16 improved, 7 failures, 8 deaths; epilepsy, 4 cases, 1 delayed success, 3 improved; tetanus, 45 cases; 14 successful, almost, if not all, cases of partial tetanus only; 2 results not stated, 29 deaths. In ataxy it has been most unsuccessful. Langenbuch gives 16 cases with 6 cured; but Bernhardt and Westphal say they have never seen a case improved or cured. Debove thinks the "lightning" pains may be relieved by it. Vizioli also thinks that mechanical distension of the hyperæsthetic nerves, inducing a changed position of nervous molecules, may modify the molecular grouping by which excitability was exalted, and the return to the normal state may ensue. The author concludes that in all cases in which the lesion is peripheral the effect is certain, almost without danger, and more prompt than any other mode of treatment. In central lesions, all means fail; in extreme ills, extreme remedies; therefore it is only to be tried in extreme cases. If by it we could promise improvement or diminution of any one of the grave symptoms, it would be the surgeon's duty to operate, but as yet we cannot say even that much.—*London Medical Record*, April 15, 1883.

Subperiosteal Resections.

The following *résumé* is given at the conclusion of an original memoir by Professor Ollier on subperiosteal disarticulations and amputations (*Revue de Chirurgie*, Nos. 7-12).

1. Amputations practised with a periosteal flap or cuff (*manchette*), though they have not always furnished results differing very much from those of ordinary amputations, are in these days of antiseptic dressings attended with results more conformable to such as surgeons have been led by experiment to expect. They favour immediate union, but in young subjects they are liable in certain regions to result in inconvenient osteophytic formations. In adults, subperiosteal amputation is not likely to cause this unsatisfactory result.

2. Subperiosteal amputation in the continuity of a bone, with preservation of the whole of the periosteal sheath and of the peripheral tissues beyond the limits of the section of the bone, gives rise in young subjects to the formation of an osseous mass, which is very useful for maintaining the length and solidity of the stump.

3. All disarticulations, with the exception of those practised for relapsing neoplastic lesions (osteosarcoma, medullary cancer, etc.), ought to be performed by the subperiosteal method. Traumatic lesions and gunshot wounds furnish the most favourable conditions for the application of this operative method.

4. These disarticulations are to be practised on the same principles as those by which we are guided in subperiosteal resections. The incisions practised in this latter class of operations will serve in the disarticulation of most of the bones, whether the surgeon amputate after having attempted to perform resection or proceed at once to disarticulate.

5. Subperiosteal disarticulations have great advantages over the older methods of resection, with regard to the performance of the operation. In cases where, for some reason or other, the surgeon cannot have recourse to artificial exsanguification, he can operate with but little loss of blood. The hemorrhage is always less severe than in operations by the older method, in which large flaps are formed and thick masses of soft parts cut through. In stripping away the soft parts from the bone, the surgeon is able to preserve all the elements that are useful for the constitution of a thick, well-padded, and even stump. In infants and young subjects one may obtain, by preserving the periosteum, a new and movable bone in the stump, and thus considerably improve the orthopædic result of the operation.

6. In subperiosteal disarticulations the wounds are limited by a fibrous membrane, which circumscribes the injury and forms a barrier against diffuse inflammations. All other things being equal, they are less dangerous than ordinary amputations, which leave a more extensive and irregular wound, since in subperiosteal disarticulations the flap is formed directly from the muscular mass, and the bone can be carefully dissected out; whilst in the older methods of amputation the muscular spaces are freely opened, and there is a risk of cutting vessels and nerves longitudinally. Moreover, the surgeon, in this latter class of operations, sacrifices healthy tissues which would have served to form part of the stump.

7. Of almost impossible application before the discovery of surgical anaesthesia, in consequence of the time they require and of the pain which they would cause to the patient, subperiosteal disarticulations cannot be met with any objection at the present day, since the question of the duration of an operation has become one of quite secondary importance.

8. In subperiosteal disarticulations, only a bistoury and raspatory are required, and a small knife, which will be found useful in the last stage of the operation (section of the soft parts). The use of large knives should be abandoned in such operations.

9. Although the longitudinal incisions of subperiosteal resections may serve in general manner for subperiosteal disarticulations, it will be found advisable to modify these to a slight extent in the latter operations. The bone should be approached in the readiest and most direct way, without any attempt being made, as in resections, to maintain the integrity of the muscles surrounding the articulation.

10. A circular operation is most suitable in performing subperiosteal resection. The wound is less extensive, and the bleeding surface is reduced to the surface of transverse section of the flesh and to the surface of the periosteal sheath.

11. If, as in cases of neoplastic lesions of osseous or periosteal origin, it be found necessary to abstain from performing subperiosteal resection, the surgeon should have recourse to periosteal resection; that is to say, he should, in separating the soft parts from the bone, follow the external aspect of the periosteum. In cases of malignant new growth, the knife should be applied as far as possible from the bone, in order to guard against local relapse.

12. In the majority of subperiosteal disarticulations (shoulder, hip, elbow), it is necessary to attack the joint as speedily as possible, in order to open the capsule and displace the end of the long bone. This having been exposed and stripped of its periosteum, the soft parts are to be completely divided. In other regions (knee) it is better to separate the soft parts in the first place, and to cut the flaps before disarticulation.—*London Medical Record*, April 15, 1883.